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SOVIET PAPER AND POLYGRAPHIC MACHINERY, DRAFTING INSTRUMENTS

PROBLEMS OF PAPERMAKING MACHINE PLANT -- Moscow, Izvestiya, 16 Jul 53

The Leningrad Plant imeni Vtoraya Pyatiletka, which specializes in the production of papermaking machinery, has equipped the Kamskiy and Mariyskiy Cellulose-Paper Combines and combines in Kondopoga, Segezha, Arkhangel'sk, and Solikamsk with papermaking machinery. Plant personnel have pledged to build new machinery in 1953 for the production of especially strong grades of paper, motion-picture film, fine leatheroid (fibra), and corrugated cardboard. The proportion of new machines built by the plant in 1953 will account for 48 percent of its total commodity output.

In the next few years NIIBUMASH (Scientific Research Institute for Planning Papermaking Machines) and the Leningrad Plant imeni Vtoraya Pyatiletka must develop a series of high-speed machines for making newsprint.

High-speed machines can raise the output of paper 75 percent for each working man and 30 percent for each square meter of floor space occupied by the machines. Consequently, the expenditures in building new papermaking enterprises could be considerably reduced.

However, certain technical problems will have to be solved before special high-speed papermaking machines can be developed.

The Ministry of Chemical Industry must develop a special type of rubber for making a stable coating for tubular rollers. Register rollers, for example, must be covered with an impermeable rubber. Present brass encased rollers which are subject to corrosion must be replaced by rubberized perforated suction rollers.

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The Ministry of Metallurgical Industry must produce rolls of increased hardness for calendars and super-calenders, and tubes of a special rolled stock, both of which will satisfy increased requirements of dynamic balancing.

To build high-speed machines, the output of antifriction bearings for drying cylinders; suction and other types of rollers; electric drives with a broad, smooth, and steady range of adjustment; etc., must be organized.

The expansion of existing enterprises is the best way of raising production with the least cost. Thus, the Ministry of Machine Building must supplement the equipment at the plants imeni Vtoraya Pyatiletka, imeni Roshal', and imeni Artem with various machines and mechanisms, machine tools, and hoist and transport equipment, while the scientific research and technical center for the development of machines must be strengthened and expanded. -- M. Nikitin, director of the Leningrad Plant imeni Vtoraya Pyatiletka and of NIIBUMASH

NEW TYPE CALENDERS -- Moscow, Pravda, 11 Jun 53

The Leningrad Plant imeni Vtoraya Pyatiletka has built a 12-roll super-calender for producing writing paper of medium density. The machine weighs 66 tons and is 7.7 meters high and 4.5 meters wide. This aggregate produces 2,520-millimeter-wide paper at the rate of 400 meters per minute. The machine exerts great pressure, which improves the quality of the paper.

Designers of the paper industry are now planning an aggregate which will produce 600 meters of paper per minute.

NEW PAPER-CUTTING MACHINES -- Kiev, Pravda Ukrainy, 21 Jun 53

The Romny Polygraphic Machine Plant has filled the order of the Pravda Publishing House for two automatic machines for three-sided trimming of books and magazines.

The plant has released to republic and oblast publishing houses 35 model LR paper-cutting machines designed by the Moscow Scientific Research Institute of the Polygraphic Industry. The machine replaces the labor of 21 men who formerly cut the paper by hand.

Another three-sided paper-cutting machine, the RCP-1, will be suitable for the use of oblast and rayon printing houses.

The RCP-1 single-blade paper-cutting machine is being assembled at the plant. This machine is distinguished by its accurate cutting and its ability to make up to 30 cuts per minute.

EMBOSSING PRESS FOR POLYGRAPHIC INDUSTRY -- Kiev, Pravda Ukrainy, 27 Jun 53

The Shadrinsk Poligrafmash Plant has perfected high-production machines for the polygraphic industry. The KP-400 press released recently will be used for hot and cold embossing of cardboard and lead matrices.

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NEW PHOTOENGRAVING METHOD -- Moscow, Vechernyaya Moskva, 20 Jul 53

An automatic photoengraving machine invented by N. P. Tolmachev was demonstrated at a recent meeting of the Newspaper Section and Orgburo of the All-Union Scientific and Technical Society of the Polygraphic Industry. The machine is portable and produces cliches by an electromechanical process.

The new process embodies a power head system which makes it possible to engrave by mechanical means. The system of intensification makes it possible to modify the tonality as required during the reproduction process. A medium-size cliché can be prepared in 10 - 15 minutes on the new machine; whereas the existing zincographic method requires 2 hours. Furthermore, less time in working with chemicals will promote healthier working conditions. A very small space is required by the machine, and it can be operated by a semiskilled worker. Another advantage is that the machine can engrave any metal or plastic matrix.

The new photoengraving method is also effective in color printing. Electrical color separation can be applied in the new system. It is possible to obtain several cliches at the same time for the required number of colors. This system not only ensures speed in manufacture but also an absolutely accurate register.

The machine makes it possible to engrave cliches from paintings by first recording the paintings on film. The process can also be used in the textile industry.

SHORTAGE OF DRAFTING INSTRUMENTS -- Leningradskaya Pravda, 5 Jul 53

In the last few years instrument-making enterprises have put out precision instruments and tools for the use of designers and draftsmen. However, there is insufficient output of these instruments and enterprises making them disregard the inquiries of designers and draftsmen.

In Leningrad it is impossible to buy the most essential instruments for designing and blueprint work, and engineers question whether it is such a forbidding problem to manufacture them.

Plants and factories are well equipped with instruments for the use of machinists but not for designers and draftsmen.

The production of drafting machines was mastered recently. These machines are convenient for mechanical drawing. The drawing board can be adjusted to any height, and two perpendicular straight edges permit drawing parallel lines quickly and accurately at any angle. At the Gipromashpribor Institute, 12 such drafting machines have been standing idle for a long time, because the straight edges have become unusable and new ones cannot be bought anywhere.

Designers and draftsmen are in chronic need of such necessary computing instruments as logarithmic scales at least 250 millimeters long. Both logarithmic scales and straight edges are manufactured at the Leningrad Computing Instruments Factory. However, since they are made in insufficient quantities and are distributed by the Ministry of Local Fuel Industry, they are seldom procurable.

Many planning organizations and design bureaus do not have drawing boards. It is practically impossible to find a board 2 meters long, and engineers are forced to crowd their measurements.

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There is also a shortage of the simplest measuring instruments. For example, steel tapes become unusable after 2 or 3 months, and the numbers become obliterated. New ones cannot be bought. Twenty-meter metal tapes are not for sale in stores. The Kamensk-Uralskiy Electrical Machinery Plant made them in 1952, but for some reason does not make them now. Since the Leningrad Plant imeni V. M. Molotov produces tape suitable for measuring, this problem could be solved without difficulty.

The Leningrad Computing Instruments Factory is one of the few enterprises in the Soviet Union making logarithmic scales, protractors, and other designing and mechanical drawing accessories. The factory's monthly plans are consistently overfulfilled, but it cannot yet satisfy the continuously growing demands. In the last few years hundreds of people have learned to use logarithmic scales, but cannot get them because of limited output.

Although plans have been made for the expansion of instrument-making facilities at the factory, little has been done. It is therefore up to the factory management to find methods of increasing production of these instruments under existing facilities.

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